CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 79-65

NPDES PERMIT NO. CA0037974

WASTE DISCHARGE REQUIREMENTS FOR:

WEST CONTRA COSTA SANITARY DISTRICT
SAN PABLO, CONTRA COSTA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, finds that:

1. West Contra Costa Sanitary District (formerly San Pablo Sanitary District and hereinafter called the discharger) submitted a report of waste discharge (NPDES Standard Form A) dated January 8, 1979.

2. The discharger treats and disposes of an average dry-weather flow of 6.0 mgd of municipal and industrial wastewater into a channel, along the southeastern dike of the Richmond Sanitary Service landfill tributary to Castro Cove, an embayment of San Pablo Bay. Present treatment consists of primary clarification, roughing filter, activated sludge, secondary sedimentation, chlorination and dechlorination. Plant design flow is 12.5 mgd (Waste 001). Sludge is treated by flotation, clarification, and digestion followed by centrifuging and/or lagooning and air drying. Final sludge disposal is by sale of dry solids and/or disposal to landfill (Waste 002).

3. The Board adopted the Water Quality Control Plan for the San Francisco Bay Basin on April 8, 1975.

4. The beneficial uses of San Pablo Bay and contiguous water bodies are:

   a. Water contact recreation
   b. Non-contact water recreation
   c. Navigation
   d. Open commercial and sport fishing
   e. Wildlife habitat
   f. Fish spawning and migration
   g. Industrial uses
   h. Preservation of rare and endangered species
   i. Shellfishing

5. The Board adopted Order 74-101 on October 15, 1974, issuing an NPDES Permit to the discharger. This was amended by Order 75-54 on August 19, 1975.

6. The Board issued a Cease and Desist Order (Order 77-105) to the discharger on July 19, 1977, prescribing a time schedule to construct an outfall to achieve compliance with initial dilution and un-ionized ammonia requirements of Order 74-101 as amended, and a time schedule to provide facilities assuring adequate treatment during periods of peak wet weather flows.

7. The discharger is constructing an interceptor and outfall, but due to delays in grant funding, anticipates completion in August 1980, 5 months later than required by the Cease and Desist Order.

8. The discharger is designing treatment and storage facilities for wet weather flows, but due to delays in wet weather monitoring caused by the prolonged drought, anticipates construction completion in April 1982, 16 months later than required by the Cease and Desist Order.

9. An environmental impact report and statement for the proposed wastewater treatment and outfall facilities, dated February 1976 and amended January 1977 and July 1977, was prepared in accordance with the California Environmental Quality Act (Public Resources Code Section 2100, et seq).

10. The environmental documents concluded that the project will have the following significant impacts on the environment:

    a. Beneficial water quality impacts due to elimination of bypassing of inadequately treated sewage during wet weather.

    b. Beneficial impacts on shellfish growing areas by the elimination of shoreline discharges of municipal effluent.

    c. Potential long term adverse impacts, which have not as yet been quantified, related to continuation of discharge of low concentrations of toxicants to Bay waters.

11. Potential impacts due to low level toxicant discharges will be mitigated by stringent NPDES permit effluent limits on toxicants. These limits are intended to protect aquatic organisms from adverse effects due to long term exposure.

12. Effluent limitations and toxic and pretreatment effluent standards established pursuant to Sections 208b, 301, 302, 303d, 304, and 307 of the Federal Water Pollution Control Act are applicable to the discharge.

13. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the proposed discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

14. The Board in a public meeting heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, West Contra Costa Sanitary District, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Federal Water Pollution Control Act, and regulations and guidelines adopted thereunder shall comply with the following:

A. Effluent Limitations

1. The discharge of Waste 001 in excess of the following limits is prohibited:

Constituents	Units	30-day Average	7-day Average	Daily Maximum
a. BOD	mg/l	30	45	60
	kg/day	1422	-	6369
b. Suspended Solids	mg/l	30	45	60
	kg/day	1422	-	6369
c. Oil & Grease	mg/l	10	-	20
	kg/day	474	-	2120
d. Chlorine Residual	mg/l	-	-	0.0
e. Settleable Matter	ml/l/hr	0.1	-	.2

2. The arithmetic mean of values for BOD and Suspended Solids in effluent samples collected in a period of 30 consecutive days shall not exceed 15 percent of the arithmetic mean of respective values for influent samples collected at approximately the same times during the same period (i.e., 85 percent removal).

3. The discharge shall not have a pH of less than 6.5 nor greater than 8.5.

4. In any representative set of samples, the waste as discharged shall meet the following limit of quality:

Toxicity: The survival of test organisms acceptable to the Board in 96-hour bioassays of the effluent shall achieve a median of 90% survival for three consecutive samples and a 90 percentile value of not less then 70% survival for ten consecutive samples.

5. The total coliform bacteria for a median of five consecutive effluent samples shall not exceed 240 per 100 milliliters. Any single sample shall not exceed a most probable number (MPN) of 10,000 total coliform bacteria when verified by a repeat sample taken within 48 hours.

6. Representative samples of waste 001 shall not contain constituents in excess of the following limits:(1)

	Unit of Measurement	50% of time	10% of time
Arsenic	mg/l (kg/day)	0.01 (0.473)	0.02 (2.12)
Cadmium	mg/l (kg/day)	0.02 (0.946)	0.03 (3.18)
Total Chromium	mg/l (kg/day)	0.005 (0.236)	0.01 (1.06)
Copper	mg/l (kg/day)	0.2 (9.46)	0.3 (31.8)
Lead	mg/l (kg/day)	0.1 (4.73)	0.2 (21.2)
Mercury	mg/l (kg/day)	0.001 (0.047)	0.002 (.212)
Nickel	mg/l (kg/day)	0.1 (4.73)	0.2 (21.2)
Silver	mg/l (kg/day)	0.02 (0.946)	0.04 (4.25)
Zinc	mg/l (kg/day)	0.3 (14.2)	0.5 (53.1)
Cyanide	mg/l (kg/day)	0.1 (4.73)	0.2 (21.2)
Phenolic Compounds	mg/l (kg/day)	0.5 (23.7)	1.0 (106)
Total Identifiable Chlorinated Hydrocarbons 2/	mg/l (kg/day)	0.002 (0.095)	0.004 (0.424)

(1) These limits are intended to be achieved through secondary treatment, source control and application of pretreatment standards.

(2) Total Identifiable Chlorinated Hydrocarbons shall be measured by summing the individual concentrations of DDT, DDD, DDE, aldrin, BHC, chlordane, endrin, heptachlor, lindane, dieldrin, polychlorinated biphenyls, and other identifiable chlorinated hydrocarbons.

B. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place.

   a. Floating, suspended, or deposited macroscopic particulate matter or foam;

   b. Bottom deposits or aquatic growths;

   c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

   d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;

   e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

a.	Dissolved oxygen	5.0 mg/l minimum. Annual median - 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
b.	Dissolved sulfide	0.1 mg/l maximum.
c.	pH	Variation from natural ambient pH by more than 0.2 pH units.
d.	Un-ionized ammonia as N	0.025 mg/l annual median 0.4 mg/l maximum.

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

C. Land Disposal Requirements

1. The discharge of Waste 002 shall not cause waste material to be in any position where it is, or can be, carried from Land Disposal Site "L-1" and deposited in waters of the State.

2. The land disposal site shall have facilities adequate to divert surface runoff from adjacent areas, to protect boundaries of the site from erosion, and to prevent any conditions that would cause drainage from the materials in the disposal site. Adequate protection is defined as protection from at least a 100-year storm, and from the highest tidal stage that may occur.

D. Discharge Prohibitions

1. Bypass or overflow of untreated wastewater to waters of the State either at the treatment plant or from the collection system is prohibited.

2. Average dry weather flow shall not exceed 12.5 mgd as determined over three consecutive months each year.

3. Discharge of waste at any point where it does not receive a minimum initial dilution of 45:1, other than periods when the Delta outflow is greater 8,000 cubic feet (227 M3) per second, is prohibited. During the periods of Delta outflow greater than 8,000 cubic feet (227 M3) per second, the waste shall receive a minimum initial dilution of 10:1 at all times.

E. Provisions

1. The discharger shall comply with the Self-Monitoring Reporting Program as ordered by the Executive Officer.

2. The discharger shall comply with all items of the attached "Standard Provisions and Reporting Requirements" dated April 1977 except A.16.

3. This permit shall be modified, or alternatively revoked and reissued as soon as practicable to incorporate an approved publicly owned treatment work (POTW) pretreatment program or a compliance schedule for the development of a POTW pretreatment program as required under Section 402(b)(8) of the Clean Water Act and implementating regulations or by the requirements of the approved state pretreatment program as appropriate.

4. The discharger shall review and update annually its contingency plan as required by Regional Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.

5. This Order is effective immediately, and expires June 1, 1984. The discharger must file a Report of Waste Discharge not later than 180 days in advance of such date as an application for issuance of new waste discharge requirements.

6. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Water Pollution Control Act, or amendments thereto, and shall take effect at the end of ten days from date of hearing provided the Regional Administrator of the U. S. Environmental Protection Agency has no objections.

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on June 19, 1979.

FRED H. DIERKER
Executive Officer

Attachments:
Standard Provisions & Reporting Requirements 4/77
Resolution No. 74-10
Self-Monitoring Program

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

West Contra Costa Sanitary District

Contra Costa County

NPDES NO. CA 0037974

ORDER NO. 79-65

CONSISTS OF

PART A, dated January 1978

AND

PART B

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT AND INTAKE

Station	Description
A-001	At any point in the treatment facilities headworks at which all waste tributary to the system is present and preceding any phase of treatment.

B. EFFLUENT

Station	Description
E-001	At any point in the outfall from the treatment facilities between the point of discharge to the effluent channel and the point at which all waste tributary to that outfall is present. (May be the same as E-001-D).
E-001-D	At any point in the disinfection facilities for Waste E-001, at which point adequate contact with the disinfectant is assured.
E-001-DC	At any point in the treatment and discharge facilities following dechlorination.

C. LAND OBSERVATIONS

Station	Description
P-1 through P-'n'	Located at the corners and midpoints of the perimeter fenceline surrounding the treatment facilities. (A sketch showing the locations of these stations will accompany each report.)
L-1 through L-'n'	Located along the perimeter levee at equidistant intervals not to exceed 100 feet. (A sketch showing the locations of these stations will accompany each report.)

D. OVERFLOWS AND BYPASSES

Station	Description
O-1 through O-'n'	Bypasses or overflows from manholes, pump stations or collection system.

Reporting: Shall be submitted monthly and include date, time and period of each bypass or overflow.

II. SCHEDULE OF SAMPLING, MEASUREMENTS AND ANALYSIS

A. The schedule of sampling, measurements and analysis shall be that given as Table I.

III. MODIFICATION OF PART "A", DATED JANUARY 1978

Does not include the following paragraphs of Part A:

C.3, C.4, C.5.c.

I, Fred H. Dierker, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 79-65.

2. Is effective on the date shown below.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.

FRED H. DIERKER
Executive Officer

Effective Date _____

Attachment:
Table I
Form A

TABLE I

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	A-001	E-001			E-001-D		E-001-DC		P&L	O			
TYPE OF SAMPLE	C-24	G	C-24	Cont	G	C-24	G	C-24	O	O			
Flow Rate (mgd)	cont			cont									
BOD, 5-day, 20° C, or COD (mg/l & kg/day)	2/W		5/W										
Chlorine Residual & Dosage (mg/l & kg/day)		2H	or	cont			2H	or (3) cont					
Settleable Matter (ml/1-hr. & cu. ft./day)		5/W											
Total Suspended Matter (mg/l & kg/day)	2/W		5/W										
Oil & Grease (mg/l & kg/day)	(1) 2W		(1) 2W										
Coliform (Total) (MPN/100 ml) per req't					3/W								
Fish Toxicity, 96-hr. TL_{50} % Survival in undiluted waste								M					
Ammonia Nitrogen (mg/l & kg/day)			M										
Nitrate Nitrogen (mg/l & kg/day)													
Nitrite Nitrogen (mg/l & kg/day)													
Total Organic Nitrogen (mg/l & kg/day)													
Total Phosphate (mg/l & kg/day)													
Turbidity (Jackson Turbidity Units)			2/M										
pH (units)							5/W						
Dissolved Oxygen (mg/l and % Saturation)													
Temperature (°C)													
Apparent Color (color units)													
Secchi Disc (inches)													
Sulfides (if DO < 5.0 mg/l) Total & Dissolved (mg/l)													
Arsenic (mg/l & kg/day)			2/Y										
Cadmium (mg/l & kg/day)			2/Y										
Chromium, Total (mg/l & kg/day)			2/Y										
Copper (mg/l & kg/day)			2/Y										
Cyanide (mg/l & kg/day)			2/Y										
Silver (mg/l & kg/day			2/Y										
Lead (mg/l & kg/day)			2/Y										

TABLE I (continued)
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	A-001	E-001			E-001-D		E-001-DC		P&L	O			
TYPE OF SAMPLE	C-24	G	C-24	Cont	G		G	C-24	O	O			
Mercury (mg/l & kg/day)			2/Y										
Nickel (mg/l & kg/day)			2/Y										
Zinc (mg/l & kg/day)			2/Y										
PHENOLIC COMPOUNDS (mg/l & kg/day)			2/Y										
All Applicable Standard Observations		5/W							W	E			
Bottom Sediment Analyses and Observations													
Total Identifiable Chlorinated Hydrocarbons (mg/l & kg/day)			2/Y										
Un-ionized Ammonia as N (mg/l)			M(2)										

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample
C-24 = composite sample - 24-hour

Cont = continuous sampling

TYPES OF STATIONS

A = treatment facility influent stations
E = waste effluent stations
C = receiving water stations
P = treatment facilities perimeter stations
L = basin and/or pond levee stations

FREQUENCY OF SAMPLING

E = each occurence
D = once each day
M = once each month

5/W = 5 days per week
2/M = 2 days per month
2/Y = once in March and once in September

2H = every 2 hours
2W = every 2 weeks
3M = every 3 months
Cont = continuous

During any day when bypassing occurs from any treatment phase(s) (Primarily, Secondary, Chlorination, and Dechlorination) in the plant, the monitoring program for the effluent shall include the following in addition to the above schedule for sampling, measurement and analyses:

1. When bypassing occurs from any primary or secondary treatment unit(s), composite sample for BOD, Total suspended solids, oil and grease (influent & effluent), grab sample for settleable matter, and continuous monitoring of flow.

2. When bypassing chlorination treatment, grab sample for Coliform (Total and Fecal), and continuous monitoring of flow.

3. When bypassing dechlorination treatment, grab sample for chlorine residual (continuous or every two hours), and continuous monitoring of flow.

FOOTNOTES:

(1) Oil and grease sampling shall consist of 3 grab samples taken at 8-hour intervals during the sampling day, with each grab being collected in a glass container and analyzed separately. Results shall be expressed as a weighted average of the 3 values, based upon the instantaneous flow rates occurring at the time of each grab sample.

If the plant is not staffed 24 hours per day or if the discharge does not occur continuously, then the three grab samples may be taken at approximately equal intervals during the period that the plant is staffed or during the period that discharge is made.

In the event that sampling for oil and grease once every two weeks or less frequently shows an apparent violation of the waste discharge permit 30-day average limitation (considering the results of one or two day's sampling as a 30-day average), then the sampling frequency shall be increased to weekly, so that a true 30-day average can be computed and compliance can be determined.

(2) In addition to monthly value, a determination for annual median shall be made. Reporting shall include NH_3, pH, temperature, TDS of effluent and calculated un-ionized ammonia.

(3) Final chlorine residual (post dechlorination) shall be reported using the attached "Form A, Chlorine Residual" or equivalent.

Month _____

Year _____

FORM A

CHLORINE RESIDUAL

	Grab Sample mg/l		Corresponding Analyzer Reading, mg/l		Number of Analyzer Readings	Number of Non-zero Readings mg/l	Maximum Analyzer Reading mg/l	Average Value of Non-zeros mg/l
	AM	PM	AM	PM				
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
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